ABSTRACT

An automatic, adaptive voice/data Ethernet device with automatic assignment of quality of service is disclosed. When a "short" packet arrives (where short can be a default value or a configured value, if desired), it is tagged and a table is searched based upon the packet's information. If there is no table entry, the packet's arrival time and size are entered into the table. If a table entry is found, a new interval is calculated by subtracting the last arrival time from the tagged value. If the new interval is approximately the same as the old interval, then the packet is sent to the appropriate output queue. If the new interval time is different than the old interval, the interval value is cleared. The present invention can improve the quality of service by reducing jitter. Each time a packet arrives and is determined to be part of a high priority packet flow, the expected arrival time of the next high priority packet is calculated and inserted into a sorted list of expected arrival times associated with destination output queues. At the output queues, a low priority packet can be held up if its completion time would be later than the next expected arrival time at the head of the arrival time list. In this manner, high priority packets that have not yet arrived will not be blocked by long low priority packets that have already started.